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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,857	03/23/2001	Roger Lacasse	01393-P0047A	5808

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EXAMINER

OCAMPO, MARIANNE S

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 06/20/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,857

Applicant(s)

LACASSE ET AL.

Examiner

Marianne S. Ocampo

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application (CA 2301992) filed in Canada on March 23, 2000. It is noted, however, that applicant has not filed a certified copy of the CA 2301992 application as required by 35 U.S.C. 119(b).

Claim Objections

2. Claim 14 is objected to because of the following informalities: a transitional phrase is missing from the first line of claim 14, and the word "comprising" should be added to line 1 after the comma and the phrase "a filter housing,". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1723

a. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between the mounting means and any part of the filter unit. Is the mounting means attached onto one of the lamellar structures comprising the filter unit or attached to the housing itself? The specification provides for the mounting means (i.e. the hanger 54) to be mounted on a part of the filter housing cover (52) which closes the open top (50) of the housing (6), as in fig. 1 and page 11, lines 9 - 10.

b). Claim 1 also recites the limitation "the filter housing" in line 9. There is insufficient antecedent basis for this limitation in the claim. It is also unclear if claim 1 is claiming simply the subcombination of the filter unit (i.e. without the filter housing and capable of being used in such a housing), or that of the combination (filter unit and filter housing). For examination purposes, the examiner considered only the subcombination is being claimed in the base claim 1 (i.e. only the filter unit, and that it is merely capable of being mounted and used in a filter housing).

c). Claim 6 recites the limitation "the bottom surface of the upper lamellar structure" in lines 7 - 8. There is insufficient antecedent basis for this limitation in the claim. For examination purposes, the examiner considered the bottom surface being the same structural element referred to as the "underside surface" of the upper lamellar structure.

Art Unit: 1723

d). Claim 9 recites the limitation "the liquids" in line 2. Are there more than one liquid being filtered through the filter unit, or just one? There is insufficient antecedent basis for this limitation in the claim.

e). Claims 2 – 5, 7 - 8 and 10 - 23 are dependent claims of claim 1, and thus, they also suffer the same defects since they depend therefrom.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1 – 4, 10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Bosnjak (US 3,951,818).

7. With regards to claim 1, Bosnjak discloses a filter unit for use in a filter housing (10), the filter unit comprising superposed and spaced apart inclined lamellar structures (20) having a lower end side and an upper end side, a passage for flow between each two of said lamellar structures (20), wherein each passage has an inlet for receiving an inflow of liquid to be filtered and an outlet (46) for discharging an outflow of filtered liquid, a filtering means (38) in each passage for obstructing the flow of liquid and retaining particulate matter contained in the liquid and a mounting means (36, 42, 22, 25) for mounting the filter unit within the housing (10), as in figs. 1 – 6 and cols. 3 - 6.

8. Concerning claim 2, Bosnjak also discloses the lamellar structures (20) having the shape of a hollow truncated structure, as in figs. 2 and 4.

9. Regarding claim 3, Bosnjak further discloses the inlet of each of the passages being located on the lower end side of the respective lamellar structure (20) and the outlet (46) is located on the upper end side of the respective lamellar structure (20), whereby the flow of liquid in the passages is ascendant, as in fig. 4.

10. With regards to claim 4, Bosnjak also discloses each of the lamellar structures (20) in the form of hollow truncated structures has an outer peripheral edge and an inner edge smaller than the outer peripheral edge and the outer peripheral edge being the lower end side of the lamellar structure and the inner edge being the upper end side of the structure, whereby the liquid

entering the passage between two truncated structures from the outer peripheral edge thereof and flows upwardly towards the inner edge thereof, as in fig. 4.

11. Concerning claim 10, Bosnjak further discloses a linking means (42, 36) for linking the lamellar structures (20) one to another in superposition, as in fig. 4.

12. With respect to claim 13, Bosnjak also discloses the hollow truncated structure being a hollow truncated cone, as in figs. 2 and 4.

13. Claims 1 – 3, 5, 13 – 16 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Cordua (US 4,402,829).

14. Concerning claim 1, Cordua discloses a filter unit for use in a filter housing (12, 14) comprising superposed and spaced-apart inclined lamellar structures (26) each having a lower end side and an upper end side, a passage (30) for a flow of liquid between each two of the lamellar structures (26), each passage having an inlet (near 146) for receiving an inflow of liquid to be filtered and an outlet (along the outer peripheral edges of annular plates 26) for discharging an outflow of filtered liquid, filtering means (in the form of projections 48 between two filter plates 26) in each of the passages (30) for obstructing the flow of liquid and retaining particulate matter (32) contained in the liquid, and mounting means (34, 38, 52) for mounting the filter unit vertically in the housing (12, 14), as in figs. 1 and 6 – 7 and in cols. 3 – 7.

15. With respect to claim 2, Cordua discloses the lamellar structures (26) having the shape of a hollow truncated structure, as in fig. 1.

16. Regarding claim 3, Cordua further discloses the inlet of the passages (30) is located on the lower end side of the respective lamellar structures (26) and the outlet is located on the upper end side of the respective lamellar structures (26), whereby the flow of liquid in the passages is ascendant, as in figs. 1 and 7.

17. With regards to claim 5, Cordua also discloses each of the lamellar structures (26) being in the form of truncated cones, having an outer peripheral edge and an inner peripheral edge smaller than the outer peripheral edge, the outer peripheral edge being the upper end side of the lamellar structure (26) and the inner edge being the lower end side of the lamellar structure (26), whereby the liquid enters the passage (30) between two truncated cones (26) from the inner edge thereof and flows upwardly towards the outer peripheral edge, as in fig. 7.

18. With respect to claim 13, Cordua also discloses the hollow truncated structure being a hollow truncated cone, as in figs. 1 and 6 – 7.

19. Regarding claim 14, Cordua disclosea the combination of the filter unit as in claim 1 with a filter housing (12, 14) comprising a filter housing (12, 14) having an inlet (18) in a bottom

portion thereof for receiving an inflow of liquid to be filtered and an outlet (22) in a top portion thereof for discharging an outflow of filtered liquid and the filter unit being mounted vertically in the housing (12, 14) by means of the mounting means (34, 38, 52), and the combination further comprising a reception chamber (near 18) in the housing (12, 14) in fluid communication with the inlet (18) and with the inlets (at the lower end side of the annular filter members 26) of the filter unit, the liquid entering the housing (12, 14) via the inlet (18) and flowing across the reception chamber to enter the inlets of the filter unit, and a discharge chamber (31) in the housing (12, 14) in fluid communication with the outlets (outermost/upper end side of each filter plate/members 26) of the filter unit, such that the filtered liquid discharged at the outlets of the filter unit flowing across the discharge chamber (31) towards the outlet (22) of the housing (12, 14), as in figs. 1 and 6 - 7 and cols. 3 - 7.

20. With regards to claim 15, Cordua further discloses all the lamellar structures (26) being similar and having the shape of hollow truncated structures, as in figs. 1 and 6 - 7.

21. Concerning claim 16, Cordua discloses the inlet of each of the passages (30) being located on the lower end side of the respective lamellar structure (26) and the outlet is located on the upper end side of the respective lamellar structure (26), whereby the flow of liquid in the passages is ascendant, as in fig. 7.

Art Unit: 1723

22. With respect to claim 23, Cordua also discloses the hollow truncated structure being a hollow truncated cone, as in figs. 1 and 6 - 7.

23. Claims 1 - 4, 13 - 17 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Doucet (US 4,707,259).

24. Regarding claim 1, Doucet discloses a filter unit for use in a filter housing (1) comprising superposed and spaced-apart inclined lamellar structures (12) each having a lower end side and an upper end side, a passage for flow between each two of said lamellar structures (12), wherein each passage has an inlet (at the lower end of each filter member 12) for receiving an inflow of liquid to be filtered and an outlet (at an inner peripheral edge thereof) for discharging an outflow of filtered liquid, a filtering means (projections on each underside of the filter members 12) in each passage for obstructing the flow of liquid and retaining particulate matter contained in the liquid and a mounting means (16, 15, 13, 17) for mounting the filter unit within the housing (1), as in figs. 1a and 3 and cols. 1 - 5.

25. Concerning claim 2, Doucet also discloses the lamellar structures (12) having the shape of a hollow truncated structure, as in figs. 1 and 3.

26. Regarding claim 3, Doucet further discloses the inlet of each of the passages being located on the lower end (outer) side of the respective lamellar structure (12) and the outlet is

located on the upper end (inner) side of the respective lamellar structure (12), whereby the flow of liquid in the passages is ascendant, as in figs. 1 and 5 and cols. 1 - 5.

27. With regards to claim 4, Doucet also discloses each of the lamellar structures (12) in the form of hollow truncated structures has an outer peripheral edge and an inner edge smaller than the outer peripheral edge and the outer peripheral edge being the lower end side of the lamellar structure and the inner edge being the upper end side of the structure, whereby the liquid entering the passage between two truncated structures from the outer peripheral edge thereof and flows upwardly towards the inner edge thereof, as in figs. 1 and 5.

28. With respect to claim 13, Doucet discloses the hollow truncated structure being a hollow truncated cone, as in figs. 1 and 3 - 4.

29. Regarding claim 14, Doucet further discloses the combination of the filter unit as in claim 1 with a filter housing (1) comprising a filter housing (1) having an inlet (near 4) in a bottom portion thereof for receiving an inflow of liquid to be filtered and an outlet (near end 2) in a top portion thereof for discharging an outflow of filtered liquid and the filter unit being mounted vertically in the housing (1) by means of the mounting means (16, 15, 17, 13), and the combination further comprising a reception chamber (including space around the filter members 12 and adjacent the inlet end 4) in the housing (1) in fluid communication with the inlet and with the inlets of the filter unit, the liquid entering the housing (1) via the inlet and flowing across the

Art Unit: 1723

reception chamber to enter the inlets of the filter unit, and a discharge chamber (above the last/uppermost filter member and space around end 2) in the housing (1) in fluid communication with the outlets (center opening) of the filter unit, such that the filtered liquid discharged at the outlets of the filter unit flowing across the discharge chamber towards the outlet (2) of the housing (1), as in figs. 1 and 5 and cols. 1 – 6.

30. With regards to claim 15, Doucet also discloses all the lamellar structures (12) being similar and having the shape of hollow truncated structures, as in figs. 1 and 3 - 4.

31. Concerning claim 16, Doucet discloses the inlet of each of the passages being located on the lower end side of the respective lamellar structure (12) and the outlet is located on the upper end side of the respective lamellar structure (12), whereby the flow of liquid in the passages is ascendant, as in figs. 1 and 5.

32. Regarding claim 17, Doucet also discloses each of the lamellar structures (12) in the form of hollow truncated structures having an outer peripheral edge and an inner edge smaller than the outer peripheral edge, the outer peripheral edge being the lower end side of the lamellar structure (12) and the inner edge being the upper end side of the lamellar structure (12), whereby the reception chamber is located all around the filter unit and the discharge chamber is in a centrally located zone of the filter unit, as in figs. 1 and 5.

Art Unit: 1723

33. With respect to claim 23, Doucet also discloses the hollow truncated structure being a hollow truncated cone, as in figs. 1 and 3 - 4.

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. Claims 6 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cordua (829) in view of Nurse et al. (US 6,306,299 B1).

36. Regarding claim 6, Cordua (829) further discloses each of the two lamellar structures (26) including an upper lamellar structure and a lower lamellar structure, but fails to disclose the filtering means in each of the passages comprising an overflow dam wall extending upright from the lower lamellar structure and having a top edge spaced apart from an underside surface of the upper lamellar structure and a linear interstice between the top edge of the dam wall and the bottom/underside surface of the upper lamellar structure. Nurse et al. teach a similar filter unit to

that of Cordua, including superposed and spaced-apart lamellar structures, wherein each of at least two lamellar structures (132) includes a lower lamellar structure and an upper lamellar structure and has a passage for a flow of liquid to be filtered therebetween, and the passage having an inlet (48) for an inflow of liquid to be filtered and an outlet for discharging an outflow of filtered liquid and a filtering means (36) in the passages, wherein the filtering means comprising an overflow dam wall (36) extending upright from a lower lamellar structure and having a top edge spaced apart from an underside/bottom surface of the upper lamellar structure and a linear interstice (space) between the top edge of the dam wall (36) and the bottom/underside surface of the upper lamellar structure, as in figs. 1, 2A, 3 and 4A – 4B. It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filtering means of the filter unit of Cordua, by adding the embodiment of the filtering means taught by Nurse et al., in order to provide an alternative filtering means which allows slowing down of flow of liquid to be filtered, thereby giving the particulate matter contained in the liquid plenty of time to sediment out/settle out from the liquid, thereby providing an improved filter unit for separating particulate matter from liquids.

37. Concerning claim 7, Nurse et al. further teach the overflow dam wall (36) in each passage following a sinuous path, as in figs. 1 and 2A. The same motivation used in claim 6 above, is applied here.

38. With respect to claim 8, Nurse et al. also teach the continuous overflow dam wall (36) having a top edge with a corrugated relief (design), as in figs. 1 and 2A. The same motivation used in claim 6 above, is applied here.

Allowable Subject Matter

39. Claims 9, 11 – 12 and 18 – 22 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

40. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art includes Doucet (259), Cordua (829) and Nurse et al. (299). However, none of these prior art and those searched, have disclosed or rendered obvious a filter unit having the limitation of the overflow dam in each of the passages comprising a plurality of vertical slots to further filter the liquid, as recited in claim 9, and further having the limitation of the linking means comprising a plurality of tabs extending vertically from the inner edge of each truncated structure and a plurality of tab receiving elements in the inner edge of the truncated structure each tab receiving element being shaped for connection with a tab of another truncated structure/cone, as in claim 11 and further the filter unit in combination with a filter housing having the limitations recited in claims 18 and 19. Claims 20 – 22 are dependent claims of claim 19 and thus, they also contain the allowable subject matter.



Conclusion

41. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6,360,898 B1 (Nurse Jr et al.), 653,012 (Koyl), 2,670,851 (Curtis) and 2,750,045 (Hoffmann et al.) and EP Patent 528,067 A1 (Suzuki).

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne S. Ocampo whose telephone number is (703) 305-1039. The examiner can normally be reached on Mondays to Fridays from 8:00 A.M. to 4:30 P.M..

43. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

44. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Application/Control Number: 09/815,857

Page 16

Art Unit: 1723

MSO
M.S.O.

June 15, 2002

M. Savage
MATTHEW O. SAVAGE
PRIMARY EXAMINER